

REMARKS

The Office Action of April 27, 2011 has been reviewed. Reconsideration of the pending claims is respectfully requested in view of the above amendments and the following remarks.

The Office Action

Claim 12 is objected to as including informalities.

Claims 1 and 12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 1, 3, 5, 7, 13-15, 20, 21 and 28-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,758,951 to Haitz in view of U.S. Patent No. 7,226,189 to Lee et al.

Claims 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haitz in view of Lee et al. and U.S. Patent Publication No. 2004/0264187 to Vanderschuit.

Claims 16 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haitz in view of Lee et al. and U.S. Patent No. 7,198,387 to Gloisten et al.

Claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Haitz in view of Lee et al. and U.S. Patent Publication No. 2004/0105262 to Tseng et al.

Claims 23-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,586,882 to Harbers in view of Vanderschuit.

Claims 26 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harbers in view of Lee et al. and U.S. Patent No. 6,746,885 to Cao.

Claim Objections

Claim 12 is objected to as including informalities. Particularly, the Examiner argues there is insufficient antecedent basis for “the phosphor”. Applicants have amended claim 12 to change “the phosphor” to “the luminescent converting element”, which Applicants respectfully submit addresses the Examiner’s concerns. Therefore, reconsideration and withdrawal of the objection are respectfully requested.

Rejections under 35 U.S.C. 112, Second Paragraph

Claims 1 and 12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Particularly, the Examiner rejected these claims as being indefinite for functional claiming, presumably according to the “Examination Guidelines for Ensuring Compliance with 35 U.S.C. 112, Second Paragraph – Definite Claim Language”, promulgated on February 9, 2011. According to the guidelines, the primary inquiry is whether the language leaves room for ambiguity or whether the boundaries are clear and precise. Factors include: (1) Whether there is a clear cut indication of the scope of the subject matter covered by the claim; (2) whether the language sets forth well-defined boundaries of the invention or only states a problem solved or a result obtained; and (3) whether one of ordinary skill in the art would know from the claim terms what structure or steps are encompassed by the claim.

Claim 1

Claim 1 recites a luminescent converting element to receive a light generated by the light engine and convert at least a portion of the received light into visible light. The Examiner argues there is no structure to the luminescent converting element. However, claim 1 provides the skilled artisan sufficient detail to determine when the claim limitation applies and when it does not. Namely, a luminescent converting element converts received light to visible light. Further, luminescent converting elements are well known to those skilled in the art as including, for example, phosphors. A patent search for luminescent converting element and variants thereof resulted in 158 patents and patent publications. The results included, for example, EP Patent No. 1593165, filed January 29, 2004, U.S. Patent Publication No. 2003/0178632, filed March 20, 2003, and U.S. Patent No. 7,101,626, filed November 26, 2011, each disclosing phosphors as a type of luminescent converting element. Notably, these examples were filed temporally proximate to the filing of the present application on May 5, 2003 and demonstrate the understanding of the skilled artisan at the time the present application was filed. Hence, the scope and boundaries of claim 1 are well known to those skilled in the art. Reconsideration and withdrawal of the rejection of claim 1 are therefore respectfully requested

Claim 12

Claim 12 recites an index matching material. The Examiner argues there is no structure corresponding to the index matching material. However, the specification of the present application notes that the index matching material is one of silicones, acrylics, epoxies, thermoplastics, glasses and any other appropriate materials. Therefore, the specification provides the skilled artisan with a guideline and examples sufficient to teach the skilled artisan the metes and bounds of the claim limitation. Further, index matching materials are well known to those skilled in the art as substances with an index of refraction that closely approximates that of an optical element or fiber. Reconsideration and withdrawal of the rejection of claim 12 are therefore respectfully requested.

Rejections under 35 U.S.C. 103(a) – Claims 1, 3, 5, 7, 13-15, 20, 21 and 28-30

Claims 1, 3, 5, 7, 13-15, 20, 21 and 28-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,758,951 to Haitz in view of U.S. Patent No. 7,226,189 to Lee et al.

Claim 1

Claim 1 recites at least one LED disposed on the platform. The Examiner argues Haitz teaches and/or suggests the at least one LED and references elements 21-26 of FIGURE 3 of Haitz. However, elements 21-26 are vertical cavity surface emitting lasers, not LEDs. Hence, Haitz cannot be fairly characterized as teaching and/or suggesting the claimed LEDs.

Claim 1 further recites a luminescent converting element to receive a light generated by the light engine and convert at least a portion of the received light into visible light. The Examiner argues Haitz teaches and/or suggest the subject feature and references element 45 of FIGURE 3 of Haitz because it converts input light to output light. However, element 45 is merely a lens (e.g., to collimate light), whereby it lacks any luminescent properties. Moreover, Haitz fails to convert at least a portion of received light into visible light. The Examiner argues previously mentioned element 45

converts visible light to visible light. However, converting requires a change in form.

Claim 1 further recites a heat sink. The Examiner relies primarily on Haitz, but recognizes that Haitz fails to disclose the heat sink. Lee et al. is therefore relied on for the heat sink. According to the Examiner, it would be obvious to combine Haitz and Lee et al. for the purpose of preventing overheating and subsequently a shortened lifespan for the device. However, Applicants respectfully traverse.

Lee et al. is not prior art. The priority date of the present application is May 5, 2003, whereas the filing date of Lee et al. is April 15, 2005. Further, the skilled artisan would not have added the teachings of Lee et al. to Haitz because Haitz already provides means for removing heat. According to Haitz, the vertical cavity surface emitting lasers can be mounted on a heat spreading substrate without a significant temperature increase. See, e.g., column 2, lines 36-54 of Haitz. Even more, combining Lee et al. and Haitz would require substantial modifications of the housing of Haitz.

For at least the foregoing reasons, Applicants respectfully submit the Examiner has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejections of claim 1, and claims 3, 5, 7, 13-15, 20, 21 and 28-30 depending therefrom, under 35 U.S.C. § 103(a).

Claim 5

Claim 5 recites the light guide provides an appearance of a filament. The Examiner argues Haitz teaches and/or suggests this feature and references element 40 of FIGURE 3 of Haitz. According to the Examiner, the jagged portion of element 40 looks like a filament. However, Applicants respectfully submit that element 40 does not look like a filament, but rather a lens, which is what it is. A component cannot be fairly characterized by looking at an isolated portion thereof. Just because the bottom of element 40 appears moderately jagged does not make element 40 a filament. Therefore, Applicants respectfully submit the Examiner has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejection of claim 5 under 35 U.S.C. § 103(a).

Claim 7

Claim 7 recites the light guide comprises a reflector. The Examiner argues Haitz teaches and/or suggests this feature and references the bottom surface of element 40 of FIGURE 3 of Haitz, which the Examiner asserts will reflect light through refraction. However, reflection and refraction as well known to be separate and distinct by the skilled artisan. Light cannot be reflected through refraction. Further, element 40 is a lens, not a reflector. See, e.g., column 5, lines 54-58 of Haitz. Therefore, Applicants respectfully submit the Examiner has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejection of claim 7 under 35 U.S.C. § 103(a).

Claim 13

Claim 13 recites one of an index matching material and a lensing material encompassing the at least one LED. The Examiner argues Haitz teaches and/or suggests this feature and references lens 45 of FIGURE 3 of Haitz as a lensing material. However, the lens does not encompass the vertical cavity surface emitting lasers of Haitz. Rather, the lens only covers the light emitting face of the lighting device of Haitz. Therefore, Applicants respectfully submit the Examiner has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejection of claim 13 under 35 U.S.C. § 103(a).

Rejections under 35 U.S.C. 103(a) – Claims 11 and 12

Claims 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haitz in view of Lee et al. and U.S. Patent Publication No. 2004/0264187 to Vandeschuit. The Examiner relies primarily on the combination of Haitz and Lee et al., but recognizes that the combination fails to disclose the features of claims 11 and 12. Vandeschuit is therefore relied on for these features. However, Vandeschuit is not prior art. The priority date of the present application is May 5, 2003, whereas the filing date of Vandeschuit is June 25, 2005. Further, even if Vandeschuit was prior art, it fails to remedy the deficiencies with the Examiner's *prima facie* case of obviousness for claim 1, from which claims 11 and 12 depend. Therefore, Applicants respectfully submit

the Examiner has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejections of claims 11 and 12 under 35 U.S.C. § 103(a).

Rejections under 35 U.S.C. 103(a) – Claims 16 and 17

Claims 16 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haitz in view of Lee et al. and U.S. Patent No. 7,198,387 to Gloisten et al. The Examiner relies primarily on the combination of Haitz and Lee et al., but recognizes that the combination fails to disclose the features of claims 16 and 17. Gloisten et al. is therefore relied on for these features. However, Gloisten et al. is not prior art. The priority date of the present application is May 5, 2003. Gloisten et al., in contrast, includes a filing of date of December 17, 2004 and claims the benefit of a provisional application filed December 18, 2003. Further, even if Gloisten et al. was prior art, it fails to remedy the deficiencies with the Examiner's *prima facie* case of obviousness for claim 1, from which claims 16 and 17 depend. Therefore, Applicants respectfully submit the Examiner has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejections of claims 16 and 17 under 35 U.S.C. § 103(a).

Rejections under 35 U.S.C. 103(a) – Claims 18

Claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Haitz in view of Lee et al. and U.S. Patent Publication No. 2004/0105262 to Tseng et al. The Examiner relies primarily on the combination of Haitz and Lee et al., but recognizes that the combination fails to disclose the features of claim 18. Tseng et al. is therefore relied on for these features. However, Tseng et al. fails to remedy the deficiencies with the Examiner's *prima facie* case of obviousness for claim 1, from which claim 18 depends. Therefore, Applicants respectfully submit the Examiner has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejection of claim 18 under 35 U.S.C. § 103(a).

Rejections under 35 U.S.C. 103(a) – Claims 23-25

Claims 23-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,586,882 to Harbers in view of Vanderschuit.

Claim 23

Claim 23 recites at least two light modules having different light emission characteristics, each including a platform and at least one LED. The Examiner argues Harbers teaches and/or suggests the at least two light modules and references element 2 and 1, 3 of FIGURE 1 of Harbers. However, element 1, 3 does not include an LED. Rather element 1, 3 merely absorbs light from element 2. Further, element 2 cannot be construed as the two light modules since the two LEDs thereof do not have different light emission characteristics.

Claim 23 further recites an index matching material. The Examiner has provided no support for such a feature because, according to the Examiner, the index matching material has no structure. However, as discussed above, Applicants respectfully disagree. The index matching material has well known structure to those skilled in the art.

Claim 23 further recites a wavelength converting material. The Examiner relies primarily on Harbers, but recognizes that Harbers fails to disclose the wavelength converting material. Lee et al. is therefore relied on for the heat sink. According to the Examiner, it would be obvious to combine Harbers and Vanderschuit for the purpose of producing light with a high color rendering index and with desirable light output qualities (such as creating white light through the combination of selected LEDs and phosphors). However, Applicants respectfully traverse.

Vanderschuit is not prior art. The priority date of the present application is May 5, 2003, whereas the filing date of Vanderschuit is June 25, 2003. Further, the skilled artisan would not have added the teachings of Vanderschuit to Harbers. To do so would be illogical since Harbers employs a converting material on element 1, 3 to maintain the appearance of a carbon filament. To add the converting material of Vanderschuit to the enclosure of Harbers would be duplicative and run counter to the desired appearance.

For at least the foregoing reasons, Applicants respectfully submit the Examiner

has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejections of claim 23, and claim 24 depending therefrom, under 35 U.S.C. § 103(a).

Claim 25

Claim 25 recites light of a second wavelength is visible and depends from claim 1. The Examiner, however, appears to have analyzed claim 25 as if it depends from claim 23. To the extent the Examiner intended to analyze claim 25 as if it depended from claim 23, the Examiner has failed to show Harbers in view of Vanderschuit renders the features of claim 1 obvious. To the extent the Examiner intended to analyze claim 25 as if it depended from claim 1, the Examiner has failed to advance a proper rejection of claim 25. Accordingly, Applicants respectfully submit the Examiner has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejection of claim 25 under 35 U.S.C. § 103(a).

Rejections under 35 U.S.C. 103(a) – Claims 26 and 27

Claims 26 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harbers in view of Lee et al. and U.S. Patent No. 6,746,885 to Cao. The Examiner relies primarily on the combination of Harbers and Lee et al., but recognizes that the combination fails to disclose the features of claims 26 and 27. Cao is therefore relied on for these features. However, Cao fails to remedy the deficiencies with the Examiner's *prima facie* case of obviousness for claim 1, from which claims 26 and 27 depend. Therefore, Applicants respectfully submit the Examiner has failed to establish a *prima facie* case of obviousness, and respectfully request reconsideration and withdrawal of the rejections of claims 26 and 27 under 35 U.S.C. § 103(a).

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1, 3, 5, 7, 11-18, 20, 21 and 23-30) are now in condition for allowance.

Remaining Claims, as delineated below:

(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT LESS HIGHEST NUMBER PREVIOUSLY PAID FOR		(3) NUMBER EXTRA
TOTAL CLAIMS	22	- 20 =	2
INDEPENDENT CLAIMS	2	- 3 =	0

This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.

The Commissioner is hereby authorized to charge any filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Deposit Account Number 06-0308.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to telephone the undersigned, at 216.363.9000.

Respectfully submitted,

Fay Sharpe LLP



Scott A. McCollister, Reg. No. 33,961
The Halle Building, 5th Floor
1228 Euclid Avenue
Cleveland, Ohio 44115-1843
216.363.9000

Certificate of Transmission or Mailing

I hereby certify that this correspondence (and any item referred to herein as being attached or enclosed) is (are) being
 transmitted to the USPTO by electronic transmission via EFS-Web on the date indicated below.
 deposited with the United States Postal Service as First Class Mail, addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

7-25-11

Elaine M. Checovich